TRAFFIC COMMISSION REPORT
May 26, 2011

Item VA

SAFE ROUTES TO SCHOOL FEDERAL CYCLE 3 GRANT

ISSUE:

The Traffic Division and Community Development Department staff would like to update Traffic Commission on our plans to apply for this grant program and request that the Chair sign Letters of Support on behalf of the Traffic Commission.

BACKGROUND:

The City has been extremely successful in applying for funds through both the State and Federal "Safe Routes to School" grant programs. The intent of these programs is to encourage children to walk and bicycle to school which combats childhood obesity, reduces local traffic congestion, and improves air quality. Safe Routes grant funding is used to improve safety around schools in order to promote biking and walking, and also to provide related educational programs and outreach.

To date, the City has been awarded six Safe Routes grants, State Cycles #3, #5, #6, #7, and #8 and Federal Cycle #1. State Cycles #3, #5, and #6 are complete and the remaining three projects are in progress.

DISCUSSION:

The Safe Routes to School Federal Cycle #3 recently opened and applications are due on July 15, 2011. The Federal grants can be used to improve elementary and middle school pedestrian safety (not high schools). The City proposes to submit two projects for this grant cycle, one to implement infrastructure improvements and one for non-infrastructure items as described below.

Infrastructure Grant: The City proposes to apply for an infrastructure grant to install a bicycle boulevard along Keystone Avenue from Pacific Avenue to Riverside Drive. This project would provide an important north-south bicycle connection and will improve safety around two local schools, Edison Elementary and St. Finbar. A workshop on this project is being held on Thursday, June 9th, at Buena Vista Library at 6:30 p.m. and is being advertised through the schools and to local residents. Input from school personnel, local residents, and school parents and students will determine other improvements to be included in the grant application. Such amenities could include new crosswalk striping or signage; medians to restrict turning movements, curb extensions with high-visibility crosswalks; sidewalk improvements; bike parking amenities at the school (lockers, stands), etc. Traffic Division staff is working to contact principals of both schools and also with the Rancho Providencia Neighborhood members to advertise the June workshop, gather their input on specific amenities, and secure their support for the application. The limit on Infrastructure Grants is $1 Million per application; the exact

amount of this grant will be determined when the project is scoped in detail based upon local input and feedback. Up to 10% of the federal grant can be used for non-infrastructure/educational/outreach purposes and the City intends to include funding for such things as educational assemblies and outreach at the two schools.

Non-Infrastructure Grant: For the first time, discrete funding is also available for non-infrastructure projects and programs. The City intends to submit a non-infrastructure grant application to fund development of a comprehensive citywide Safe Routes to School plan by a consultant. This plan would incorporate the City's existing bike plan and School Traffic Safety Subcommittee findings and recommendations. This grant would also fund student outreach and education programs such as bicycle safety assemblies, giveaways, and prizes for contests which promote bicycling and walking to schools. The limit on non-infrastructure grants is $500,000 per application.

RECOMMENDATIONS:

Staff requests that Traffic Commission support these two applications and that the Chair sign the two provided Letters of Support to be included with the applications.

ATTACHMENTS:

1 – Letter of Support – Infrastructure Project
2 – Letter of Support – Non-Infrastructure Project

ATTACHMENT VA-1

PUBLIC WORKS DEPARTMENT
150 North Third Street • P.O. Box 6459 • Burbank, California • 91510
www.burbankusa.com

May 26, 2011

California Department of Transportation
Local District 7
100 S. Main Street
Los Angeles, CA 90012

RE: Safe Routes to School Grant, Federal Cycle #3

To Whom It May Concern:

The Traffic Commission of the City of Burbank, an appointed nine-member citizen advisory commission to the City Council, would like to express its support for the City's infrastructure application for this grant cycle. We are in support of the concept to install a bicycle boulevard along Keystone Street from Pacific Place to Riverside Drive, as well as other pedestrian and bicycle amenities. These improvements will enhance safety for students at Edison Elementa.y and Saint Finbar School (a parochial K-8) which are located along the route. The Burbank Traffic Commission supports encouraging students to walk or bicycle to school for both health and environmental reasons.

Because the safety of students on their way to and from school is a priority for the entire Burbank community, we strongly endorse the City's infrastructure application for Safe Routes to School, Federal Cycle #3.

Sincerely,

Brian Malone
Chair

ATTACHMENT VA-2

PUBLIC WORKS DEPARTMENT
150 North Third Street • P.O. Box 6459 • Burbank, California • 91510
www.burbankusa.com

May 26, 2011

California Department of Transportation
Local District 7
100 S. Main Street
Los Angeles, CA 90012

RE: Safe Routes to School Grant, Federal Cycle #3

To Whom It May Concern:

The Traffic Commission of the City of Burbank, an appointed nine-member citizen advisory commission to the City Council, would like to express its support for the City's Non-Infrastructure application for this grant cycle to fund a comprehensive, citywide Safe Routes Plan as well as to fund bicycle and pedestrian educational outreach programs.

The Burbank Traffic Commission supports encouraging students to walk or bicycle to school for both health and environmental reasons. It has been a focus of this Commission to encourage pedestrian and bicycle education to residents, including California law regarding helmet safety, visibility, and other concerns. This grant would allow the City to prepare a plan and make a concerted and comprehensive effort to "get the word out" about this important topic.

Because the safety of students on their way to and from school is a priority for the entire Burbank community, we strongly endorse the City's Non-Infrastructure application for Safe Routes to School, Federal Cycle #3.

Sincerely,

Brian Malone
Chair

TRAFFIC COMMISSION REPORT
May 26, 2011

Item VB

LNCV UPDATE

ISSUE:

Traffic Commission requested a monthly update of LNCV activities with respect to web based permit applications.

BACKGROUND:

On March 1, 2011 City Council directed staff to develop an interim web-based permit process similar to the e-mail type system used by License and Code for garage sale permits. Staff from Public Works, Police, and IT met in March to discuss how best to achieve LNCV permit requirements and still maintain controls needed for permit issuance. Initially IT felt that they could internally develop the web based permit application designed by Public Works, but they ultimately determined that an outside vendor was needed to prepare the program. Vision Net, was selected as the outside web developer and completed the new permit process on April 29, 2011.

DISCUSSION:

Staff returned to City Council on May 10, 2011 to present the interim permit process and request approval of the proposed citation fine and permit fee. A fee of $5.00 and a fine of $55.00 were approved and became effective the following day. With this approval by Council, staff was able to activate the new on-line permit system on the City website. The LNCV permit application link was "live" by 11:00 a.m., May 11, 2011.

Along with activating the permit link, staff updated the informational LNCV flyer with on-line permit information and placed the updated flyer in several locations on the city web-site.

The web-based permit provides Public Works Administrative staff the information needed (via email) to process a valid permit for entry into the ePals data base. The user is able to print a permit any hour of the day with the fee payment based on an honor system via the U.S. Postal Service. If payment is not received within 72 hours of permit issuance, the Police Department is notified that the permit is invalid and a citation can be issued. Police Department staff is available for users who need assistance printing a permit after-hours and on weekends.

To date, staff has received several calls asking questions about the new permit process but no online permits have been issued.

The final web based permit process, which will include a secure online payment system, remains scheduled for completion in Fall of 2011.

RECOMMENDATIONS:

Receive and File.

TRAFFIC COMMISSION REPORT
May 26, 2011

Item VC

MAGNOLIA/SAN FERNANDO PEDESTRIAN CROSSWALK

ISSUE:

Traffic Commission requested staff to review the potential elimination of the westerly crosswalk at the intersection of Magnolia Boulevard and San Fernando Boulevard.

BACKGROUND:

In 2010, Traffic Commission requested an evaluation of scramble type crosswalk at the intersection of Magnolia Boulevard and San Fernando Boulevard with the intent of reducing conflicts between pedestrians and vehicles. Staff prepared and presented a report on November 18, 2010 on the subject matter and recommended against its implementation of a pedestrian only scramble crosswalk. The Commission accepted staff's recommendation. At that meeting the possible removal of the crosswalk on the west leg of the intersection between the mall and businesses on San Fernando Boulevard was discussed to potentially reduce traffic congestion at the intersection.

DISCUSSION:

Magnolia Boulevard and San Fernando Boulevard meet in a "T" intersection in downtown Burbank which is heavily used by both pedestrians and vehicles. Magnolia Boulevard is an east-west street with two through lanes in each direction. San Fernando Boulevard has one lane in each direction with angle parking on both sides from Angeleno Avenue to Magnolia Boulevard through the downtown area. San Fernando Boulevard has two travel lanes in the northbound direction approaching Magnolia Boulevard. The center lane is an exclusive left turn and the outside lane is a shared left and right lane (see Attachment C-1 for a vicinity map). Two left turn lanes are required as there is a heavy left turn movement from San Fernando Boulevard.

Conflicts between northbound left turning traffic and pedestrians in the crosswalk on the west leg of the intersection cause traffic congestion. Traffic congestion and vehicle queues from the intersection also blocked access to parking spaces on San Fernando Boulevard. In October 2008, staff modified the traffic signal phasing of the intersection to allow the pedestrians on the west to proceed at the same time as the green solid ball for the north bound direction. If there are cars still waiting in a queue to make a left turn, they get a green left turn arrow to proceed after the pedestrian crossing time is up.

Most conflicts have been eliminated, except some pedestrians still cross Magnolia Boulevard against the pedestrian signal. Field observations do not indicate any backups or traffic congestion during peak hours, but some pedestrians violate the red don't walk signal. The Police Department has an aggressive program in the downtown area regarding pedestrians crossing a street against the traffic signal, but unfortunately

the police cannot be present at all times.

The two crosswalks on Magnolia Boulevard carry almost the same amount of pedestrian traffic and they both connect businesses on San Fernando Boulevard to the mall. Staff anticipates that the elimination of the crosswalk on the west side will cause some concerns by those merchants along that side of the street as well as the mall, as they will lose the direct connection between the two shopping areas. Additionally, pedestrians are likely to violate the crossing prohibition.

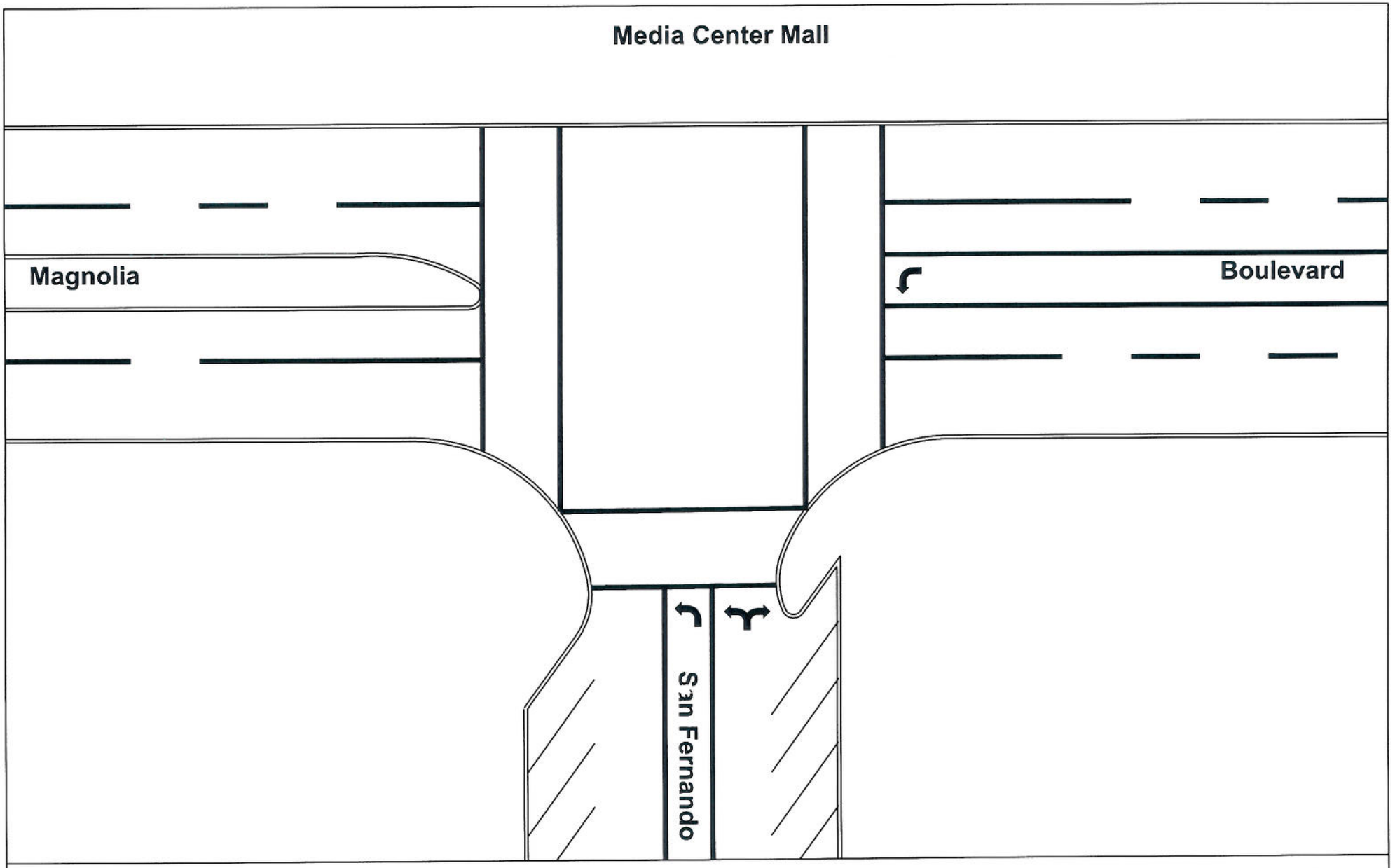
While staff sees some value in the elimination the crosswalk on the west side of Magnolia Boulevard to ease traffic congestion on San Fernando Boulevard, the connection between businesses and their customers in downtown Burbank is a valuable asset that should be retained. For this reason, staff does not recommend the elimination of the westerly crosswalk at the intersection of Magnolia Boulevard and San Fernando Boulevard

RECOMMENDATIONS:

Staff does not recommend any changes to the existing crosswalks at the intersection of Magnolia Boulevard and San Fernando Boulevard.

ATTACHMENTS:

1 – Magnolia Boulevard/San Fernando Boulevard Vicinity Map



Attachment VC-1

Magnolia / San Fernando Crosswalks

TRAFFIC COMMISSION REPORT
May 26, 2011

Item VD

VICTORY BOULEVARD PEDESTRIAN CROSSING

ISSUE:

The Traffic Commission discussed pedestrian activities crossing Victory Boulevard near Ralph Foy Park at their regularly scheduled meeting on February 24, 2011. At that meeting the Commission requested staff to revisit this issue after staff has collected more data.

BACKGROUND

On October 26, 2010, a local student, Alyson Taylor, presented information on the pedestrian activity crossing Victory Boulevard in the vicinity of Ralph Foy Park (See Attachment VD-1 for a vicinity map). The student requested that a marked crosswalk be installed at a location convenient to parking at Ralph Foy Park. At the February 24, 2011 meeting, the Traffic Commission deliberated the issue and discussed options. The Commission voted not to install an uncontrolled, marked crosswalk. However, they requested staff to consider other alternatives or facilities to assist pedestrians in crossing Victory Boulevard. Staff agreed to collect more information such as pedestrian and vehicular volume data during evening hours and weekends within the first five blocks east of Hollywood Way to evaluate various options.

DISCUSSION:

The Traffic Commission requested a discussion of options for a crossing of Victory Boulevard. The Federal Highway Administration (FHWA)[1] suggests that the following elements be considered in the establishment of pedestrian crossing facilities:

- Pedestrian warning signs
- Advance stop lines with supplemental signs
- Rumble strips on the approaches
- Pedestrian crossing pavement stencils on the approaches
- Push button activated in-pavement flashing lights
- Flashing beacons
- Variations of overhead pedestrian crosswalk signs, warning or regulatory
- Crosswalk lighting
- Raised medians or refuge islands
- Flat topped speed humps (speed tables)
- Traffic calming measures, such as curb extensions

---

1 Safety Effects of Marked verses Unmarked Crosswalks at Uncontrolled Locations, Final Report and Recommended Guidelines, FHWA Publication Number HRT-04-100, September 2005

- Traffic signals
- Various combinations of these measures.

The FHWA study also presented information taken from hundreds of crash sites to evaluate the safety of marked versus unmarked crosswalks. Attachment VD-2 includes Figures 18 and 19 from that study. The diagrams show that the environmental conditions on streets like Victory Boulevard (no median, greater than 15,000 ADT, and 4 travel lanes) have a significantly greater accident rate with marked, uncontrolled crosswalks than with unmarked crosswalks. The marked crosswalk pedestrian accident rate is almost 5 times greater than the unmarked crosswalk rate, and the accident rate for marked, uncontrolled crosswalks increases with increasing traffic demand.

The FHWA recommends that pedestrian crosswalk safety facilities be installed based on the number of traffic lanes, the traffic volume, the number of pedestrians, and the environment of the area. These data must be collected and evaluated prior to selecting safety measures for the potential crosswalk.

Staff has now collected pedestrian and vehicular counts during a weekday (Thursday) and weekend on Victory Boulevard between Hollywood Way and Fairview Street. Vehicular traffic counts were also taken in the same area. Attachment VD-3 summarizes the collected data. The pedestrian data show that Sunday morning has heavy pedestrian crossing activity and Saturday midday activity is also relatively heavy. The weekday pedestrian crossings are very low.

The vehicular traffic volume on Victory Boulevard is relatively consistent for both weekday and weekend traffic. However, the Sunday traffic demand is light during the high Sunday pedestrian activity. The Saturday heavy pedestrian activity and the heavy traffic demand occur during the same period (about 1:00 PM). The weekday pedestrian activity is very minor.

A review of reported accidents from January 1, 2008 through April 1, 2010 along this segment of Victory Boulevard revealed five accidents at three intersections: Victory Boulevard at California (1 accident), Victory at Ontario (3), and Victory at Fairview (1). There are also a total of two midblock accidents within these five blocks. As can be seen, the number of accidents is quite low and no mitigation is required.

CONCLUSIONS:

Staff collected data on vehicular and pedestrian activity on Victory Boulevard between Hollywood Way and Fairview Avenue. Staff also reviewed the reported accidents within this segment. The result does not meet any of the required California Manual on Traffic Control Devices (MUTCD) warrants to install any pedestrian safety device.

Heavy pedestrian activity occurs for about 5 hours during the week, on Saturday and Sunday. During the remaining163 hours of the week, pedestrian volume is very low.

High Sunday pedestrian crossing periods occur when traffic demand is very light, while Saturday crossings are moderate for both vehicle and pedestrian traffic. Any device to control traffic for pedestrians on Victory Boulevard would increase traffic congestion resulting in a higher incidence of all accidents.

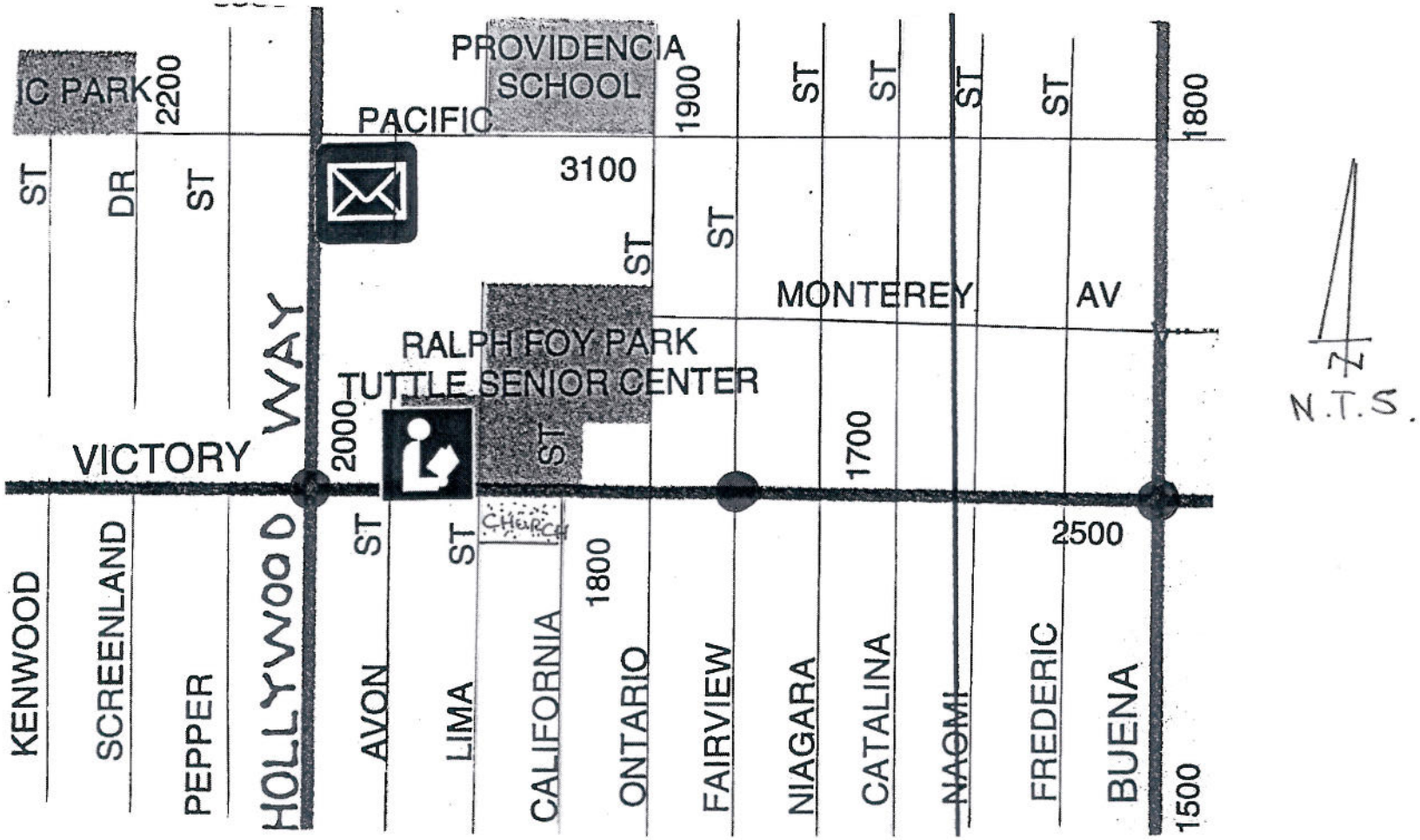
RECOMMENDATIONS:

Staff does not recommend any additional traffic control devices along Victory Boulevard from Hollywood Way to Fairview Street.

Attachments:

1. Vicinity Map
2. FHWA Figures 18 and 19
3. Pedestrian and Vehicular Counts

ATTACHMENT VD-1



ITEM VD. VICTORY BOULEVARD PEDESTRIAN CROSSING

VICINITY MAP

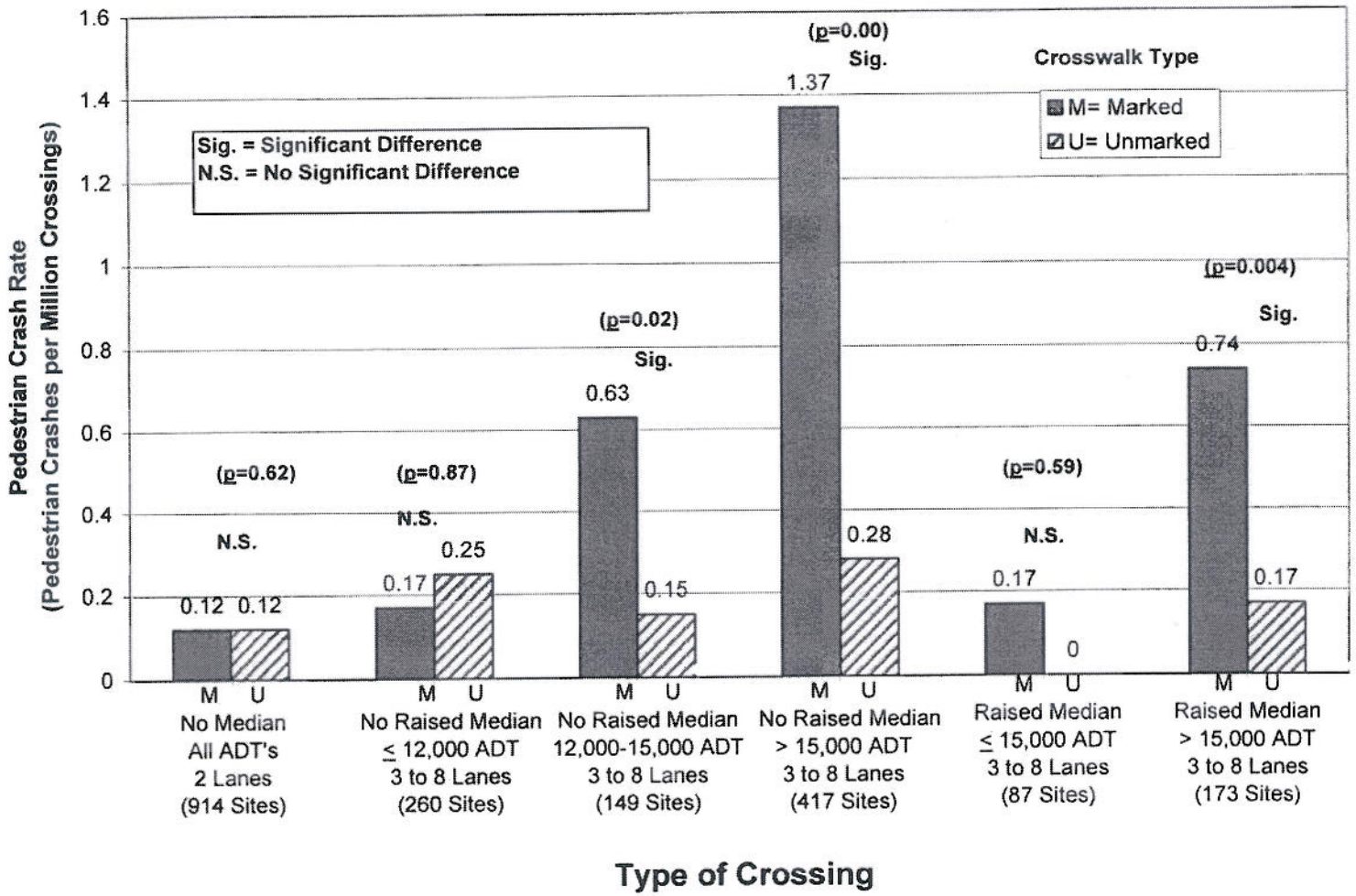


Figure 18. Pedestrian crash rate versus type of crossing.

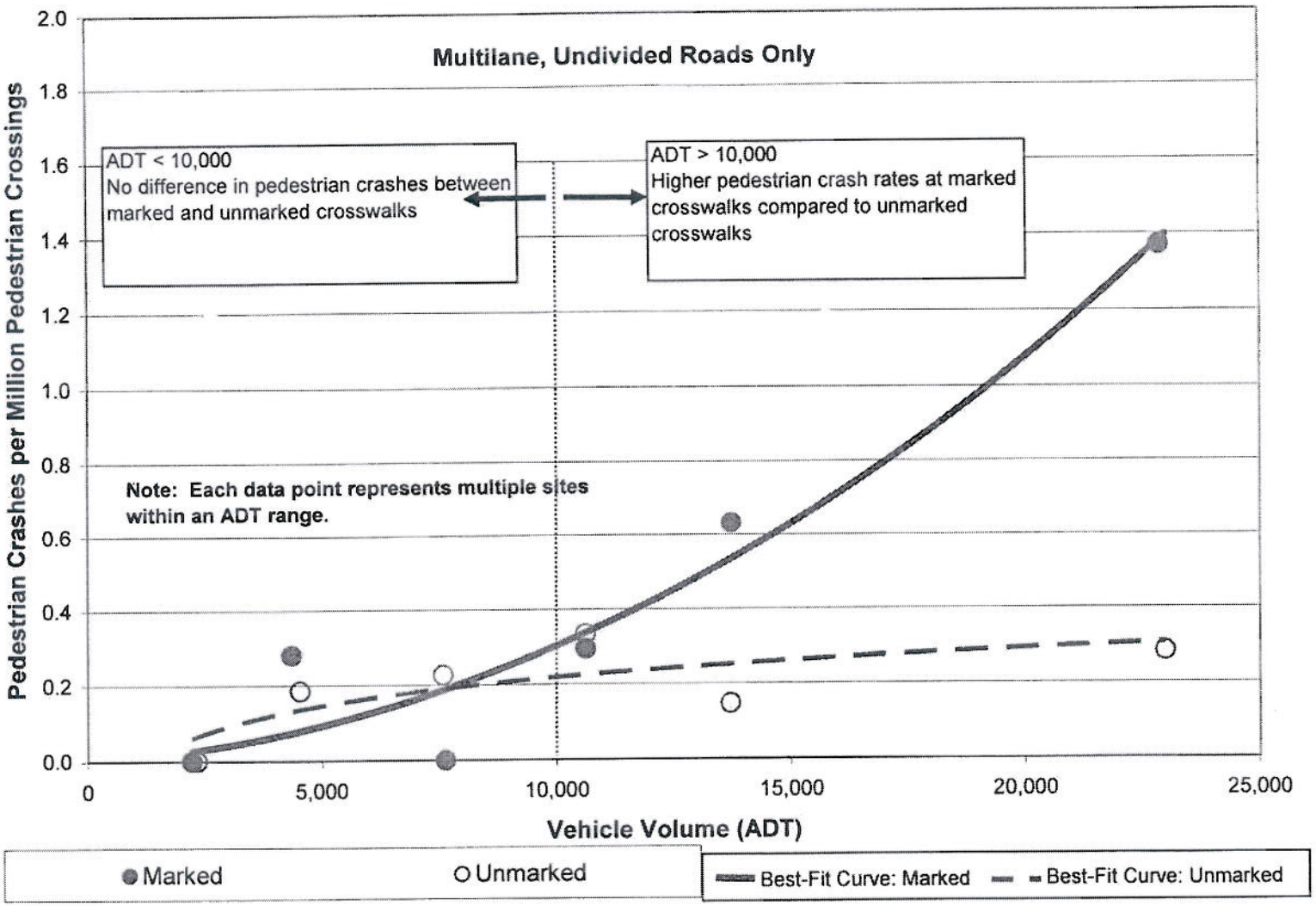
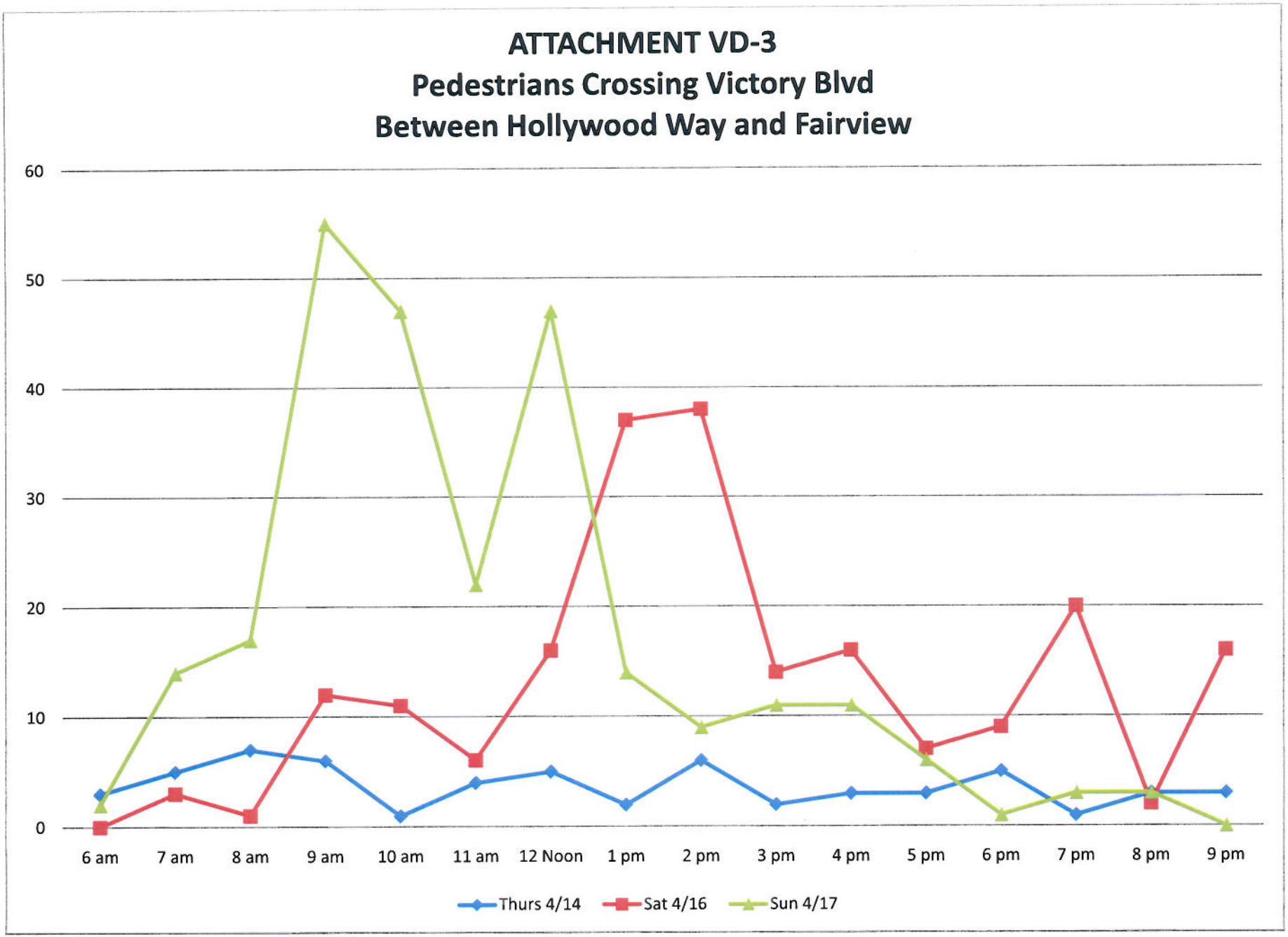
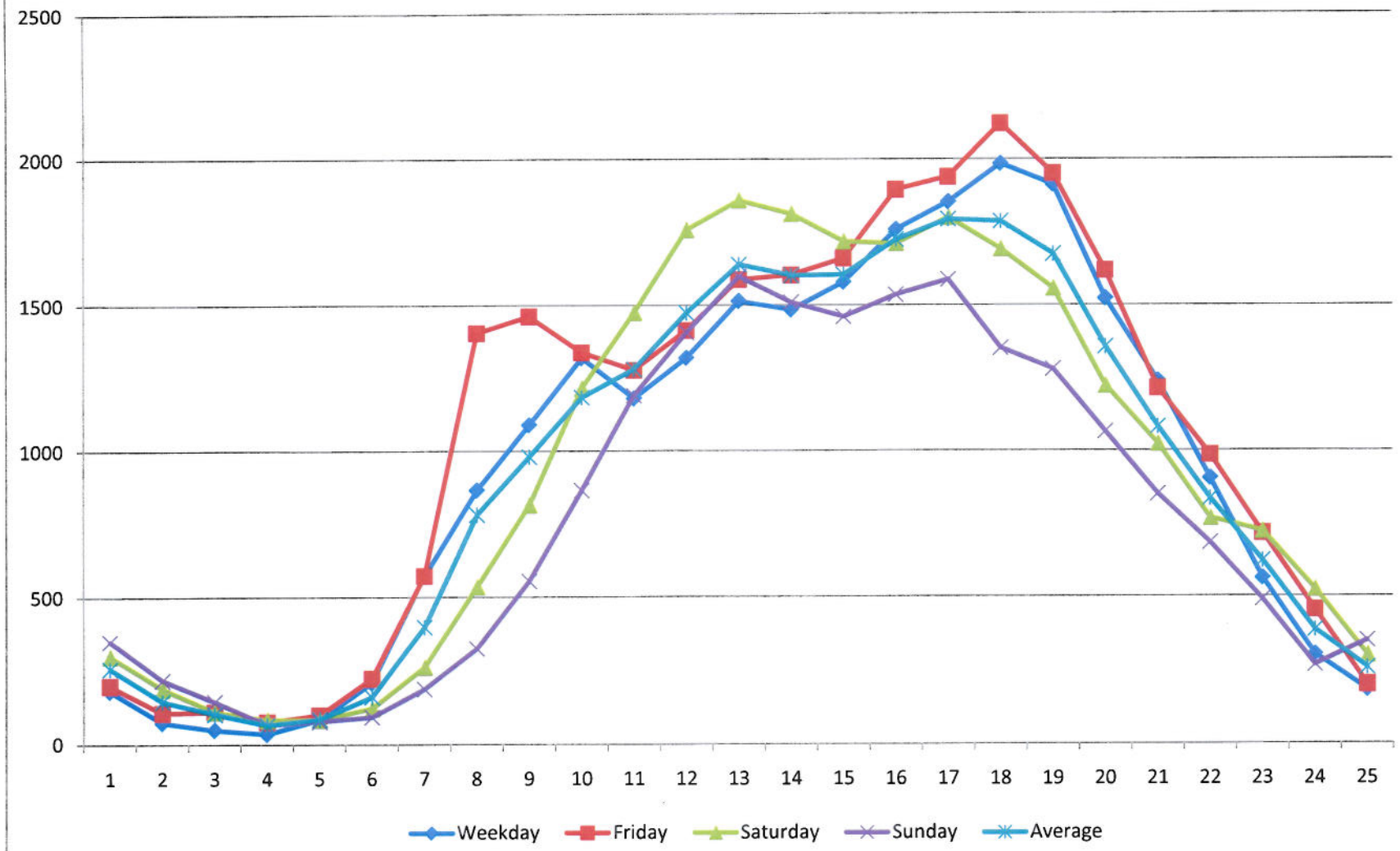


Figure 19. Pedestrian crash rates by traffic volume for multilane crossings with no raised medians—marked versus unmarked crosswalks.

ATTACHMENT VD-3
Pedestrians Crossing Victory Blvd
Between Hollywood Way and Fairview



Attachment VD-3 (continued)
Victory Boulevard Traffic
Total Daily Traffic Demand



TRAFFIC COMMISSION REPORT
May 26, 2011

Item VE

TRAFFIC CALMING/SPEED HUMP CRITERIA

ISSUE:

The Traffic Commission requested information regarding available and approved traffic calming devices.

BACKGROUND

Over the years, staff has addressed cut-through traffic and speeding on residential streets by installing a variety of traffic calming devices. These installations occur as a result of neighborhood protection discussion and plans, or because the approved speed hump process and criteria are met, as approved by City Council.

DISCUSSION:

There is a variety of approved traffic calming devices in the toolbox that includes:

- Bike lanes or edge lines
- Barriers
- Diverters
- Chokers
- Medians
- Traffic Signal Timing
- Speed Hump or Table
- Route signing
- One Way Streets
- Stop Signs

The City of Burbank Speed Hump Installation Criteria was approved by City Council in July 1996, and revised in October 1998 (provided here in Attachment VE-1). As part of this process, a petition must be completed and submitted to Public Works Traffic Engineering Division for further evaluation. This evaluation consists of collecting vehicular count as well as a speed survey of the area. In order to meet the minimum requirement, "...**the street needs to have minimum daily traffic volumes over 500 cars per day and/or prevailing speeds of 30 mph or more."**

A high percentage of Burbank residential streets meet these requirements and, thus, are eligible to receive speed humps upon request by the residents. The average prevailing 85th percentile speed on most streets is 31 or 32 mph, and most streets carry about 400 to 500 vehicles per day. In order to conform more closely to national standards, staff recommends modifying the current criteria to make the criteria slightly more restrictive:

> ...the street must have a minimum daily traffic volume of more than 500 cars per day **and** prevailing speeds of **32** mph or more (NOTE: Changes in bold.)

RECOMMENDATIONS:

Staff recommends that the Traffic Commission consider the new proposed criteria for speed hump installation and modify the language regarding volume and speed to read:

> ...the street needs to have minimum daily traffic volumes over 500 cars per day and prevailing speeds of 32mph or more.

Attachments:

1. Current Burbank City Speed Hump Criteria

CITY OF BURBANK
"SPEED HUMP INSTALLATION CRITERIA"

(Adopted by City Council July 16, 1996, Revised October 13, 1998)

Speeding on residential streets is a common complaint reported by concerned citizens. Speed Humps are often requested because they are perceived as a quick and effective solution to speeding.

Speed humps are 12-foot-long by 3-inch (±1/8") high ridges of pavement placed across a roadway to slow vehicles down as they cross over them.

The City Council adopted the following criteria that must be met for the placement of speed humps:

1. **Street Classification and Materials:** Only on streets that are residential in nature. Only on streets that are comprised of asphalt – not concrete.

2. **Street Width and Number of Lanes:** Only on streets with roadways that are 40 feet wide or less with one travel lane in each direction.

3. **Street Grades:** Only on streets with vertical grades of less than 5%.

4. **Horizontal Alignment:** Only on streets with 300 feet radius or more of horizontal centerline.

5. **Traffic Volume and Speeds:** Only on streets with minimum daily traffic volumes over 500 cars per day and/or prevailing speeds of 30 mph or more.

6. **Emergency Vehicle Access:** Not to be placed on streets that are designated emergency vehicle access routes.

7. **Transit Routes:** Not to be placed on routes that are established transit routes.

8. **Petition:** A City standard petition form that is signed by one person from each property or dwelling unit, either owner or resident. The number of "in favor" signatures comprise at least 2/3rds of the owner/residents on the streets impacted. The petition contact person has contacted and noted on the petition at least 80% of the total owner/residents impacted.

There is no cost to the residents to install speed humps.
Speed humps will comply with the City of Los Angeles installation design criteria.
The City may remove any or all of the humps at any time for safety reasons.

CITY OF BURBANK
Public Works Department
Traffic Engineering
(818) 238-3915

Speed humps
Pros and cons

Pros:

- Vehicle speeds typically decrease in the vicinity of the speed hump to approximately 24 miles per hour.
- Speed humps reduce speeds 24 hours a day, 7 days a week.
- Speed humps may decrease traffic volume by discouraging non-resident traffic.

Cons:

- Speed humps increase the emergency response time for fire and police vehicles. Speed humps may disturb or injure patients riding in ambulances.
- Traffic may be diverted to an adjacent street to avoid speed humps.
- Drivers tend to speed up between humps or may drive in the gutter to make up for lost time.
- Speed humps can be hazards to bicyclists, motorcyclists, and pedestrians. Pedestrians may confuse speed humps for crosswalks.
- Signs and striping associated with speed humps can be unsightly to the neighborhood.
- Vehicle noise increases in the vicinity of speed humps due to braking and suspensions.
- People with disabilities may experience discomfort going over speed humps.

CITY OF BURBANK

Public Works Department, 333 East Olive Avenue, Burbank, California 91502
Traffic Engineering -- (818) 238-3915

Petition for the Installation of Speed Humps

We, the undersigned residents, do hereby petition the City of Burbank to install speed humps,

on _____

between _____ and _____ .

"As a contact person, I personally certify, under penalty of perjury under the laws of the State of California, that to the best of my knowledge signatures on the attached petition are true and correct."

"I attest that each undersigned person is 18 years of age or older."

"I attest that a copy of the City of Burbank Speed Hump Installation Criteria for the placement of speed humps, revised October 13, 1998, and "Speed Humps Pros and Cons" was attached to this petition for review at the time this petition was signed."

The designated contact person(s) regarding speed humps in this area is(are):

Print name of contact person:_____ Signature:_____

Daytime Phone Number: _____ Executed on _____ in Burbank, California

Print name of alternate contact person:_____ Signature:_____

Daytime Phone Number: _____ Executed on _____ in Burbank, California

---

NOTE: Only one signature per dwelling unit is required.

Signature	Print Name	Print Street Address	In Favor	Opposed
1.				
2.				
3.				
4.				
5.				
6.				

CITY OF BURBANK

MEMORANDUM

DATE: May 7, 1998

TO: Robert R. Ovrom, City Manager

FROM: Michael W. Davis, Fire Chief

SUBJECT: TRAFFIC-CALMING DEVICES AND THEIR IMPACT ON EMERGENCY RESPONSE TIMES

PURPOSE

To acquaint the members of the community of Burbank with the negative impacts on the emergency service delivery system associated with the installation of traffic mitigation devices such as speed humps and others.

DISCUSSION & ANALYSIS

Traffic-calming devices are appearing on roadways throughout the United States in increasing numbers. These devices include speed humps, traffic circles, curb extensions, rumble strips, edge lines, pedestrian refuge islands and others. They have proven effective in slowing traffic, reducing the number of vehicular accidents and discouraging motorists from cutting through residential neighborhoods to speed their trips. Despite the benefits, speed humps, in particular, have several disadvantages, not the least of which is the significant delay they create for responding fire and police safety units.

This subject has become a hot issue for all concerned – residents, motorists, elected officials, emergency service providers and transportation officials. Those responsible for public safety, the fire service and law enforcement, are faced with a difficult dilemma – opposing these devices because they generally delay fire and police service delivery, or tolerating the devices since they prevent accidents and injuries to the public.

Recently in Maryland, the Montgomery County Fire and Rescue Commission (FRC) identified an urgent need to address the speed hump impact on fire safety vehicles responding to emergencies. The commission conducted field tests to analyze the effect of speed humps on response times. The purpose of the field tests was to obtain locally generated, quantitative data that would serve to verify that test results from similar studies conducted in Portland, Oregon and Austin, Texas.

In the Portland study, delays up to 9.4 seconds per hump was found regarding larger fire vehicles. The Austin study revealed, among other findings, that fire engines experience delays of about 3.7 seconds per hump and that delays up to 9.7 seconds per hump can occur when ambulances transporting patients must drive over speed humps.

In April 1997, the FRC, with assistance from local fire and police organizations, conducted field tests with fire apparatus driving over speed humps of the types typically found throughout Montgomery County.

The field tests were based upon the following assumptions:

- The effects of speed humps will slow down responding fire apparatus more so than typical automobiles driven by the public which can usually drive over these devices at speeds equal to or within 10 mph below the posted speed limit.

- Field tests with a fire engine, two types of aerial ladder units, and an ambulance (three of which are typical of apparatus utilized by the Burbank Fire Department) would provide a representative sample of fire-rescue vehicle types and sizes on which to collect data and base conclusions.

- Field tests which feature speed humps that are 12 feet long in the direction of travel, three to four inches in height at the crest (similar to the type being used in the City of Burbank), would serve as a realistic worst-case test.

One constraint, which was considered to be beyond the scope of this particular study and not included in the testing process, was the impact of the use of speed humps on patients being transported by ambulance. This removed from consideration the presentation of two important issues: the impact on travel time to the hospital and the discomfort and potential exacerbation of injury to the patient.

Twelve test runs were conducted featuring the four types of apparatus, using three different drivers per vehicle. The test runs were timed and the results compared to times calculated for courses of similar distances without humps in order to determine delays attributed to these devices.

On the speed-hump course, the apparatus were attempting to maintain a constant speed of 25 mph, a speed which represents the typical limit for roadways with speed humps and the maximum safe speed for an aerial ladder truck to travel the course, as determined during pre-test runs. On the 25 mph speed hump course, the average impact delay per hump was found to range between a high of 7.3 seconds for the aerial ladder truck and a low of 3.8 seconds for the ambulance.

Perhaps more importantly, the test vehicles averaged slightly less than 20 mph across the speed hump test route, about half the response cruising speed of the 35-40 mph typically attained by fire department vehicles on unimpeded roads. This information comes from a widely accepted response time study conducted in New York City by the Rand Institute.

CONCLUSION

The Montgomery County test results, in combination with those of the Portland and Austin tests, confirm that while speed humps offer a cost-efficient approach to reducing vehicular speed and reducing the number of accidents and injuries in neighborhoods, these devices cause considerable delays for responding emergency apparatus. These delays may adversely impact the outcome of life-threatening incidents. Thus government officials and citizens who determine the use and specific placement of speed humps in their communities must give serious consideration to this information when contemplating the use of these traffic mitigation devices.

Since many fire departments are facing the unwelcome challenge of coping with the delays and other negative effects associated with speed humps it is advisable to seek a course of action that will minimize the consequences. Ensuring that the public is aware of the adverse effects of these devices as they relate to fire service delivery is a good start. An informed citizenry can then weigh the pros and cons of employing these devices and accept the consequences of their decisions and actions.

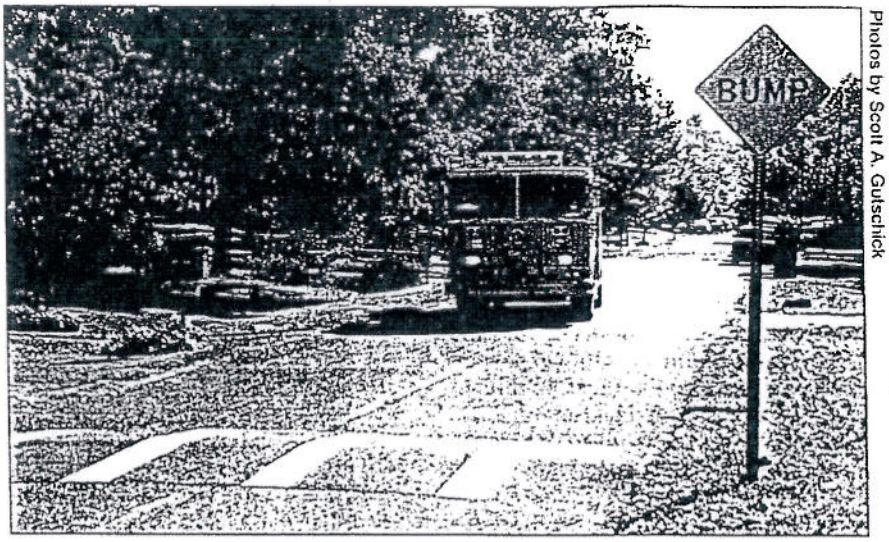
Traffic-Calming Devices: Coming To A Roadway Near You

By SCOTT A. GUTSCHICK

Traffic-calming devices are appearing on roadways throughout the United States in increasing numbers. These devices include speed humps, traffic circles, curb extensions, rumble strips, edge lines, pedestrian refuge islands and others. They have proven effective in slowing traffic, reducing the number of vehicular accidents and discouraging motorists from cutting through residential neighborhoods to speed their trips. Despite their benefits, speed humps and traffic circles, in particular, have several disadvantages, not the least of which is the significant delay they create for responding fire-rescue apparatus.

Weighing the advantages versus the disadvantages has become a hot issue for all concerned – residents, motorists, elected officials, emergency service providers and transportation officials. The fire-rescue service, responsible for public safety (along with law enforcement and emergency management officials), is faced with a difficult dilemma – opposing these devices because they adversely affect fire-rescue service delivery, or tolerating the devices since they prevent accidents and injuries to the public.

With the increasing presence of these traffic calming devices throughout Montgomery County, MD (i.e., installation of about 1,100 speed humps and 50 traffic circles on 275 county-owned roadways since 1994), the Montgomery County Fire and Rescue Commission (FRC) identified an urgent need to address speed-hump/traffic-circle impact on fire-rescue vehicles responding to emergencies. The commission conducted field tests to quantify and analyze the effect of speed humps and traffic circles on response times, with the idea of having the Department of Public Works and Transportation (DPWT) share these test results with the public when applications for speed humps and traffic circles are submitted.



Photos by Scott A. Gutschick

Photo shows that the overall impact delay begins long before the fire-rescue vehicle (Engine 301) reaches the actual speed hump, as deceleration precedes a safe and prudent traversing of the hump.

Field Tests

In April 1997, the FRC and DPWT, with assistance from local fire-rescue and police organizations, conducted field tests of fire-rescue apparatus traversing speed humps and traffic circles of the types typically found throughout Montgomery County. The purpose of these field tests was to obtain locally generated, quantitative data that would serve to verify that test results from similar studies conducted in Portland, OR, and Austin, TX, were valid in Montgomery County, as well.

In the Portland study, delays up to 9.4 seconds per hump and up to 10.7 seconds per circle were found regarding larger fire-rescue vehicles. The Austin study revealed, among other findings, that engines experience delays of about 3.7 seconds per hump and that delays up to 9.7 seconds per hump can occur when ambulances transporting patients must traverse speed humps. The FRC believed that local test results, as well as findings from the Portland and Austin studies, would prove useful to county officials and residents who must weigh the positive and negative aspects of speed humps and traffic circles when contemplating their widespread usage and placement.

The specific objectives of the joint FRC-DPWT field tests were to:

- Determine the amount of delay experienced by responding fire-rescue vehicles in traversing speed humps and traffic circles, and
- Determine the maximum speed at which these devices can be safely traversed by fire-rescue vehicles.

Because of the volatility of the traffic-calming issue among county residents, flyers were distributed to residents along the test courses explaining the purpose of the upcoming tests as well as the anticipated dates and times.

Montgomery County's field tests were based upon the following assumptions:

- The effects of speed humps and traffic circles adversely impact responding fire-rescue apparatus more so than typical automobiles driven by the public which can usually traverse these devices at speeds equal to or within 10 mph below the posted speed limit.
- Field tests which feature an engine, two types of aerial units (i.e., tiller-style ladder truck; aerial tower),

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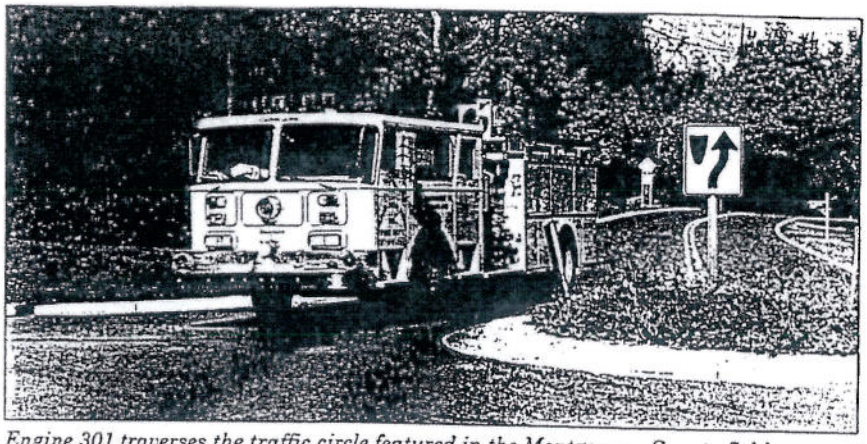


Engine 301 traverses the traffic circle featured in the Montgomery County field tests.

and an ambulance will provide a representative sample of fire-rescue vehicle types and sizes on which to collect data and base conclusions.

• Field tests which feature the "Watts" speed hump (i.e., parabolic-shaped, 12 feet long in the direction of travel, three to four inches in height at the crest) and a standard-design traffic circle will serve as realistic worst-case tests.

Constraints which impacted the field tests included the following:

• Twenty-two-foot flat-top speed humps, which are typically used on Montgomery County roadways having speed limits in the 30-35 mph range, were not evaluated in this series of tests. Because of their flat-top design, they are believed to have a lesser impact on fire-rescue response times than do the parabolic-shaped Watts humps.

• The effects of speed humps and traffic circles on vehicles and onboard equipment were not studied because of the complexity of isolating hump/circle impact from that of overall wear and tear related to everyday use.

• The effect of speed humps on patients being transported by ambulance (which presents two issues: the impact on travel time to the hospital, and the discomfort and potential exacerbation of injury to the patient) was considered to be beyond the scope of this particular study.

Two Courses In Study

Two courses were utilized in the field tests, one having three Watts speed humps and the other having a single traffic circle. The three-hump course was representative of the county's common practice of multiple-hump placement over short distances, and the single circle was representative of the typical placing of circles (multiple circles over short distances can be found in the county but are not widespread).

Twelve test runs were conducted on each course, featuring the four types of apparatus and three different drivers per vehicle. The weight listed below for each vehicle used in the tests is gross vehicle weight, plus onboard equipment, as measured by the Maryland State Police using portable scales. The apparatus included:

• **Truck 10** – A 1987 Seagrave 100-foot aerial ladder, tractor-drawn with a rear tiller (54,200 pounds), operated by the Cabin John Park Volunteer Fire Department.

• **Tower 6** – A 1989 Sutphen 100-foot aerial tower (50,750 pounds), operated by the Bethesda Fire Department.

• **Engine 301** – A 1986 Seagrave pumper with a 750-gallon tank (37,850 pounds), operated by the Cabin John Park Volunteer Fire Department.

• **Ambulance 248** – A 1996 Freightliner ambulance (14,850 pounds), operated by the Hillandale Volunteer Fire Department.

The test runs were timed and the results compared to calculated times for courses of similar distances without humps and circles in order to determine delays attributed to these devices. It is important to note that the impact delay of each speed hump or traffic circle is the sum total of the time lost to deceleration as the unit approaches the device, the time to traverse the device itself, and the extra time required to accelerate back to the desired response speed.

On the 1,945-foot speed-hump course, the apparatus were attempting to maintain a constant speed of 25 mph, a speed which represents the typical limit for roadways having Watts humps and the maximum safe speed for a tractor-drawn ladder truck to traverse the course, as determined during pre-test runs. On the 985-foot traffic-circle course, the apparatus were attempting to maintain a constant speed of 35 mph, the speed limit for that particular roadway.

Test Results

On the 25-mph speed hump course, the average impact delay per hump was found to range between a high of 7.3 seconds for the tiller truck (T10) and a low of 2.8 seconds for the aerial tower (AT6). The average delays experienced by Engine 301 (E301) and Ambulance 248 (A248) were 4.2 and 3.8 seconds, respectively. The highest delay is equivalent to responding from a station .05 mile per speed hump farther away from the incident location, at 25 mph, along an unimpeded route. The ladder truck, therefore, need only cross eight humps to add a full minute to its response time and need only cross 10 humps to add the equivalent of a half mile to its response.

Perhaps more important, the four test vehicles averaged slightly less than 20 mph across the speed hump test route, about half the response cruising speed of 35-40 mph typically attained by fire-rescue vehicles on unimpeded roads (results of a widely accepted response time study conducted in New York City by the Rand Institute indicate that fire department apparatus travel at an average cruising speed of 39.2 mph, following the initial half mile of the response route when units are accelerating to that cruising speed). In addition, T10 aver-

aged only 6.1 mph while traversing the 12-foot parabolic-shaped humps, about 19 mph below the desirable speed for the test course and about 29-34 mph below a typical response cruising speed in the 35-40 mph range. Likewise, A248, E301 and AT6 averaged only 8.7, 9.1 and 10.8 mph, respectively, while traversing the 12-foot speed humps.

On the traffic-circle course, where the units were attempting to maintain a constant speed of 35 mph, the average delay ranged between a high of seven seconds for T10 and a low of 3.2 seconds for A248. The impact delays experienced by AT6 and E301 were 5.4 and five seconds, respectively. Similar to the speed-hump test results, the higher delay is equivalent to responding from a station about .05 mile per traffic circle farther away from the incident location, at 35 mph, along a route free of traffic circles. Of greater importance, the four test vehicles averaged slightly less than 28 mph on the traffic circle test course, about 7-1 2 mph less than the response cruising speed of 35-40 mph attained on unimpeded roads.

In addition, T10 and AT6 averaged only 10.3 mph while traversing the circle, about 25 mph below the desirable speed for the test course and about 30 mph below a cruising speed of 40 mph. Likewise, A248 and E301 averaged only 14.0 mph, respectively, while traversing the circle, also far below both the desired speed and cruising speed.

It is important to emphasize that these speed-hump/traffic-circle tests were conducted at speeds appropriate for the two test courses but somewhat slower than the typical 35-40-mph response cruising speed of fire-rescue apparatus. If similar tests were conducted in Montgomery County at speeds approaching 40 mph, greater delays (in at least the nine-to-10.5-second range for larger vehicles) would be expected, as indicated by the results of the Portland tests. The Montgomery County test results could, therefore, be considered as representing minimum delays that one would expect for responding vehicles in the county.

The Bottom Line

The Montgomery County tests results, in combination with those of the Portland and Austin tests, confirm that speed humps and traffic circles cause considerable delays for responding fire-rescue apparatus, which may adversely impact the outcome of life-threatening incidents. Delays of this nature must be given serious attention by the public and government officials who determine the employment and specific placement of speed humps and traffic circles in their communities. While speed humps and traffic circles offer a cost-efficient approach to reducing vehicular speed and reducing the number of traffic accidents/injuries in neighborhoods, they present the major disadvantage of slowing fire-rescue vehicles.

When response delays attributed to traffic-calming devices become common throughout your jurisdiction, you may be faced with the difficult choice of increasing (i.e., adding new stations, apparatus and personnel) or reallocating resources in order to continue meeting your department's response time standards/goals, or upwardly modifying your standards to reflect these unavoidable delays. Either choice comes at a price – reduced service or increased spending. The crux of the matter is what is acceptable to the citizens of your community?

As a result of the speed-hump and traffic-circle tests conducted in Montgomery County, several recommendations were made by the FRC in an attempt to minimize the effects of speed humps and traffic circles:

1. The results of this in-county study should be made available by the DPWT to any county resident or community organization approaching it concerning the installation of speed humps and traffic circles. A community pursuing installation of these devices will then have the appropriate information at hand to make an informed decision. Should it choose hump/circle installation, the community will be, in essence, accepting the fact that fire-rescue units will require greater time to reach locations in their neighborhood.

2. The DPWT should notify the local volunteer fire-rescue corporation of any request for speed hump or traffic circle installation in its first-due area, so that the corporation is given the opportunity to discuss its concerns with the originating party prior to DPWT approval of installation.

3. The issues and results associated with the field tests be addressed in the county's on-going evaluation of the traffic-calming program. During the evaluation process, consideration should be given to establishing "primary emergency response routes" for fire-rescue apparatus for which traffic-calming strategies would be limited to those which do not impede emergency apparatus (Portland and Austin are also studying this concept). An approach of this nature would ensure that response routes used extensively by fire-rescue vehicles on a daily basis be kept free of emergency vehicle-impeding speed humps and traffic circles, while continuing to allow the presence of these devices on roadways lacking the "primary emergency response route" designation.

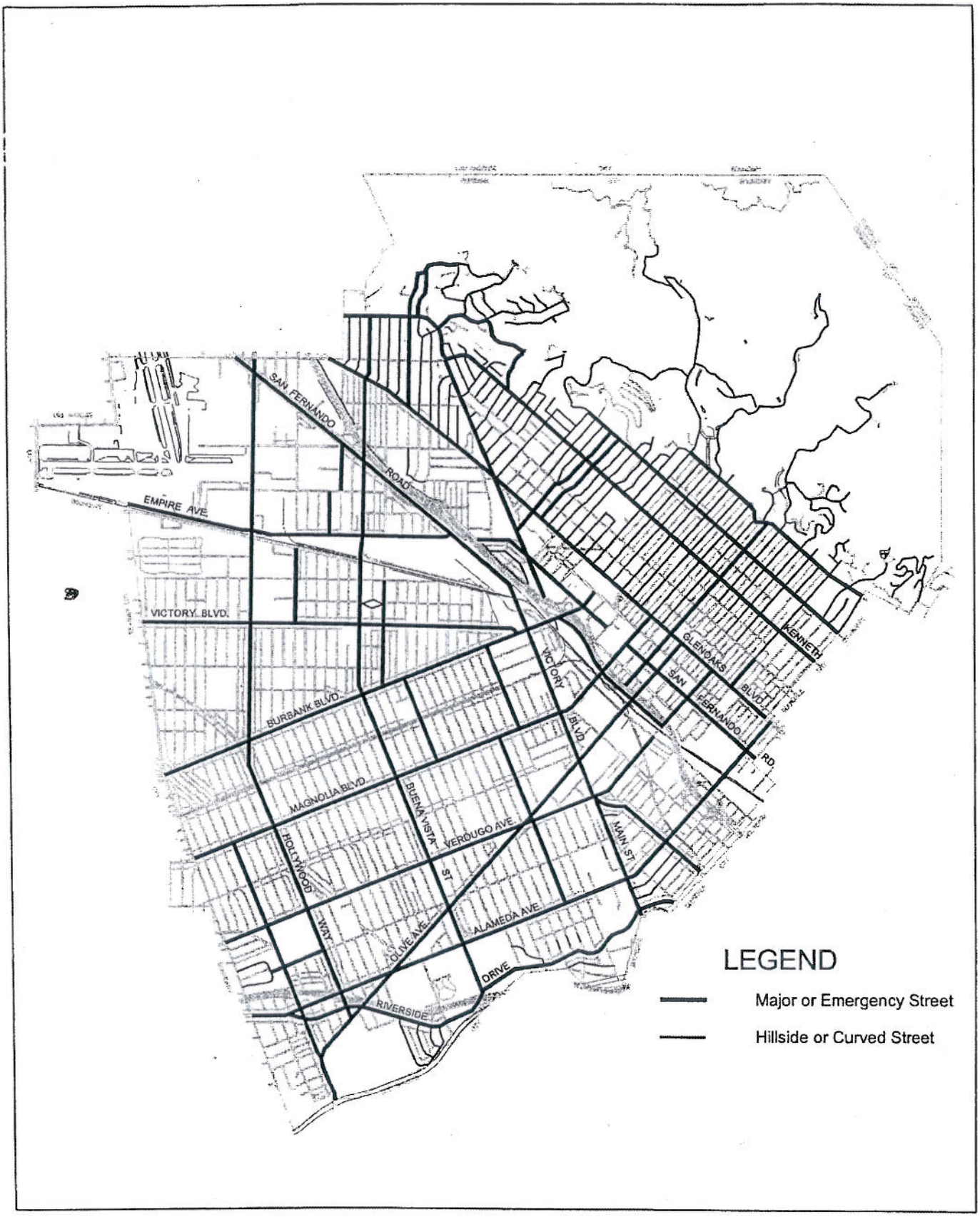
Since many fire-rescue departments are facing the unwelcome challenge of coping with the delays and other negative effects associated with speed humps and traffic circles, it is advisable to seek a course of action that will minimize the consequences. Ensuring that the public is aware of the adverse effects of these devices as they relate to fire-rescue service delivery is a good start. To provide the most meaningful data to your constituency, you may wish to conduct field testing of the traffic-impeding devices installed in your municipality. An informed citizenry can then weigh the pros and cons of employing these devices and accept the consequences of their decisions and actions.

An equally important action might be to pursue the approach of working with local government officials and the public to designate roadways frequently traveled by responding fire-rescue vehicles as "primary emergency response routes" in the same context as the Montgomery County FRC recommendation.

MONTGOMERY COUNTY PROFILE

Montgomery County, MD, with an area of about 500 square miles and a population of some 815,000, borders Washington, D.C., to the north. The county's fire and rescue service is a combined system comprised of approximately 1,300 volunteer and 760 career personnel, operating 33 fire-rescue stations. Nineteen independent volunteer fire-rescue corporations and the Department of Fire and Rescue Services (which employs the county's career personnel) are responsible for providing direct fire and rescue services to Montgomery County. A seven-member Fire and Rescue Commission (FRC) is responsible for adopting and enforcing county-wide policies, regulations, standards, procedures, plans and programs applicable to all fire, rescue and emergency medical services operations.

In 1996, the county's fire-rescue service responded to 81,913 incidents, including mutual aid incidents in surrounding jurisdictions. There were 142,200 individual unit responses to these incidents by the service's primary units (as defined by FRC regulation): engines, aerial units, quint, rescue squads, ambulances and paramedic (i.e., "medic") units.


SAN FERNANDO ROAD
EMPIRE AVE.
VICTORY BLVD.
BURBANK BLVD.
MAGNOLIA BLVD.
HOLLYWOOD WAY
BUENA VISTA ST.
VERDUGO AVE.
OLIVE AVE.
ALAMEDA AVE.
RIVERSIDE DRIVE
VICTORY BLVD.
MAIN ST.
GLENOAKS BLVD.
SAN FERNANDO RD.
KENNETH
LEGEND
Major or Emergency Street
Hillside or Curved Street

TRAFFIC COMMISSION REPORT
May 26, 2011

Item VF

VEHICLES FOR SALE ON PUBLIC STREETS

ISSUE:

The Traffic Commission requested more information on existing regulations regarding the sale of vehicles on public streets.

DISCUSSION:

The exiting Burbank Municipal Code Section 6-1-1012: USE OF STREETS FOR DISPLAY, ADVERTISING OR STORAGE OF VEHICLES FOR SALE OR RENT PROHIBITED states:

> No person engaging in the business of automobile repair or selling, renting or parking vehicles shall park or stand any such vehicle on any street or City public parking lot for display, advertising or storage purposes. [Formerly numbered Section 29-48; renumbered by Ord. No. 3058, eff. 2/21/87; 2637.] "

RECOMMENDATIONS:

Discuss and provide recommendations, if any.